

# California Biomedical Industry

June 20, 2023

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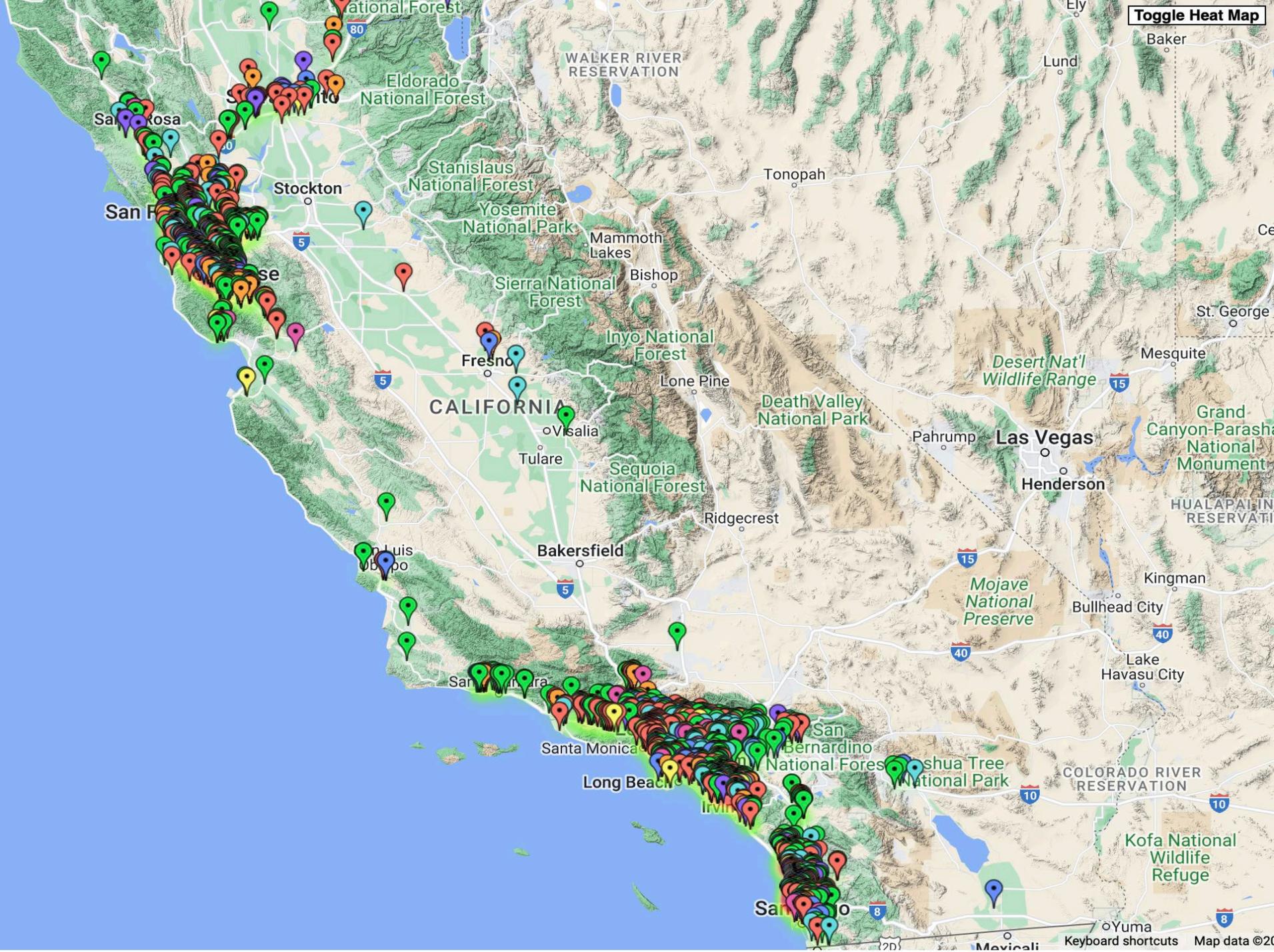


**BIOMEDICAL  
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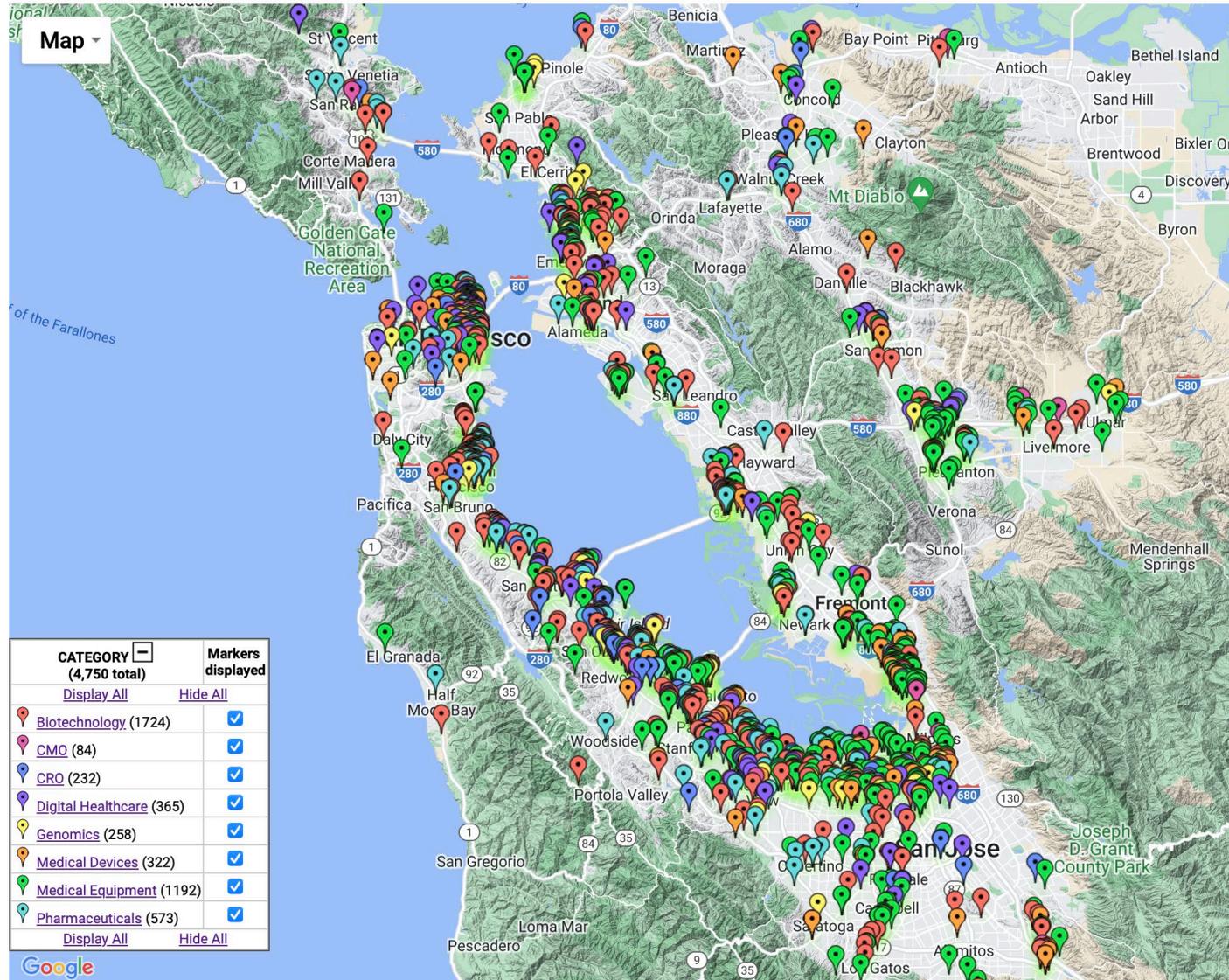
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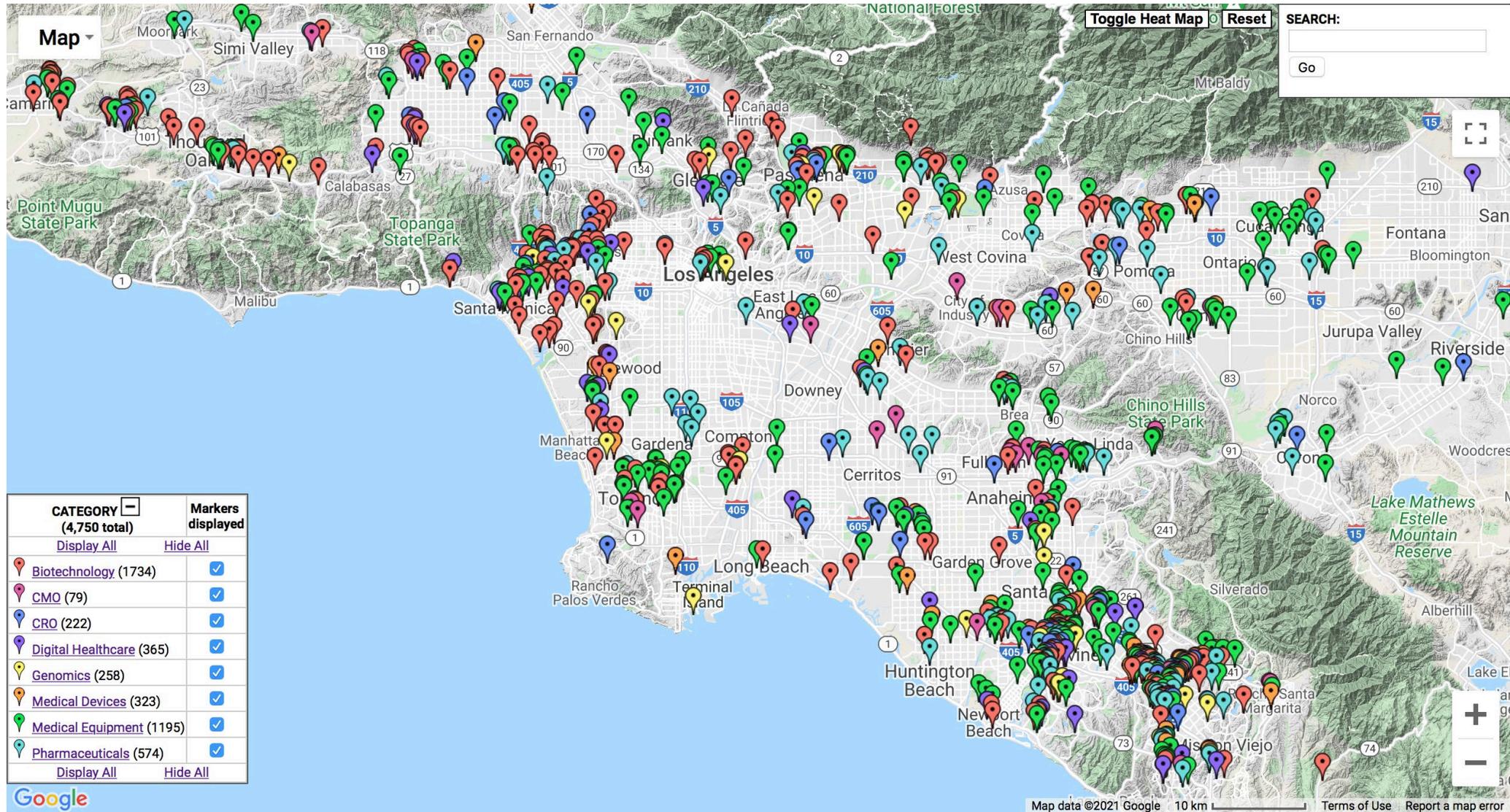
# California Biomedical Companies



# San Francisco Bay Area

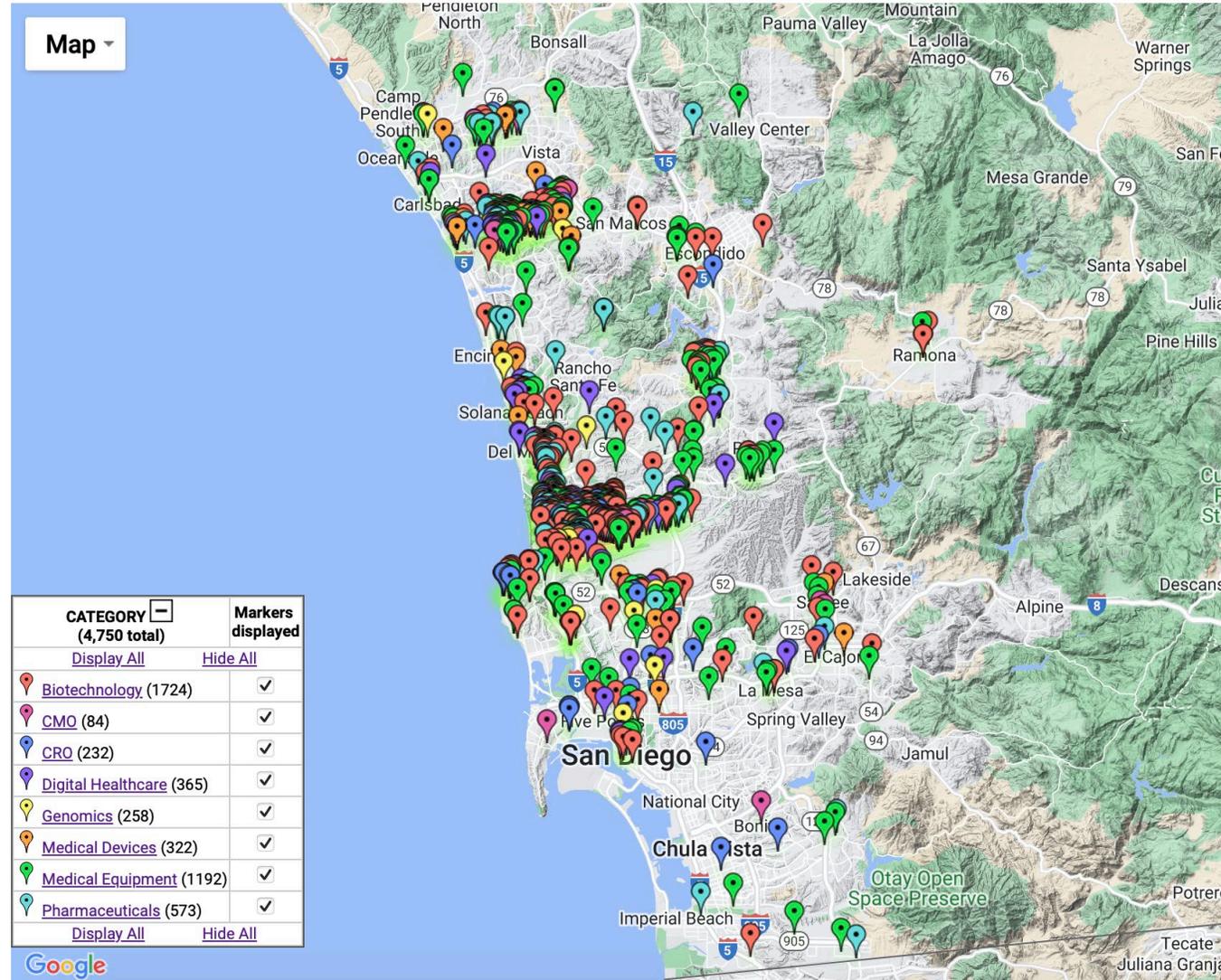


# Los Angeles Region



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# San Diego County

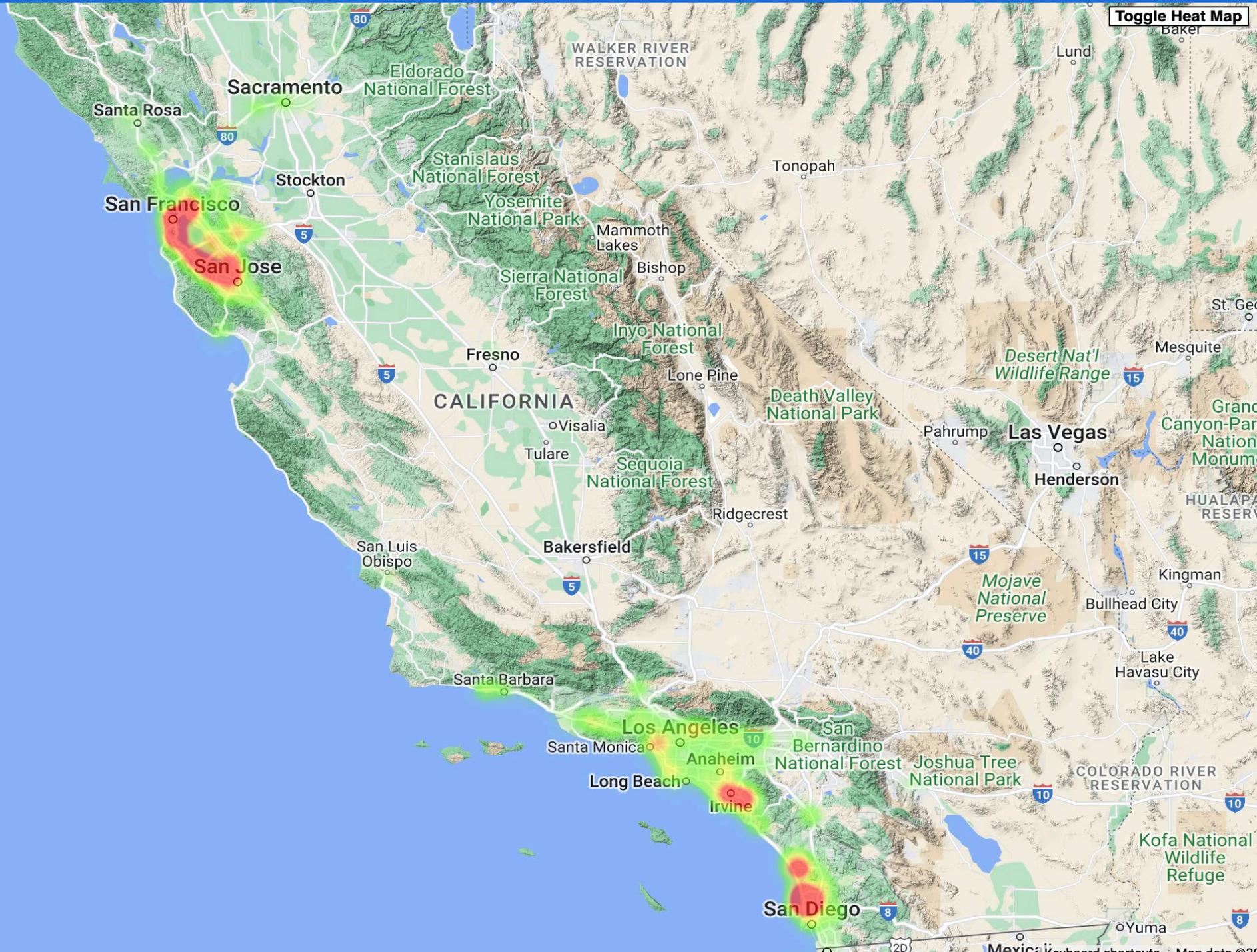


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# California Biomedical Industry

|                           | <b>SF Bay Area</b> | <b>LA Region</b> | <b>San Diego</b> |
|---------------------------|--------------------|------------------|------------------|
| <b>Biotechnology</b>      | 814                | 366              | 505              |
| <b>Pharmaceuticals</b>    | 254                | 142              | 156              |
| <b>Medical Devices</b>    | 173                | 86               | 51               |
| <b>Medical Equipment</b>  | 500                | 353              | 279              |
| <b>Digital Healthcare</b> | 209                | 61               | 80               |
| <b>Genomics</b>           | 128                | 38               | 80               |
| <b>Total</b>              | 2,078              | 1,046            | 1,151            |

# California Biomedical Companies



# Calculating Location Quotients

**Fremont**

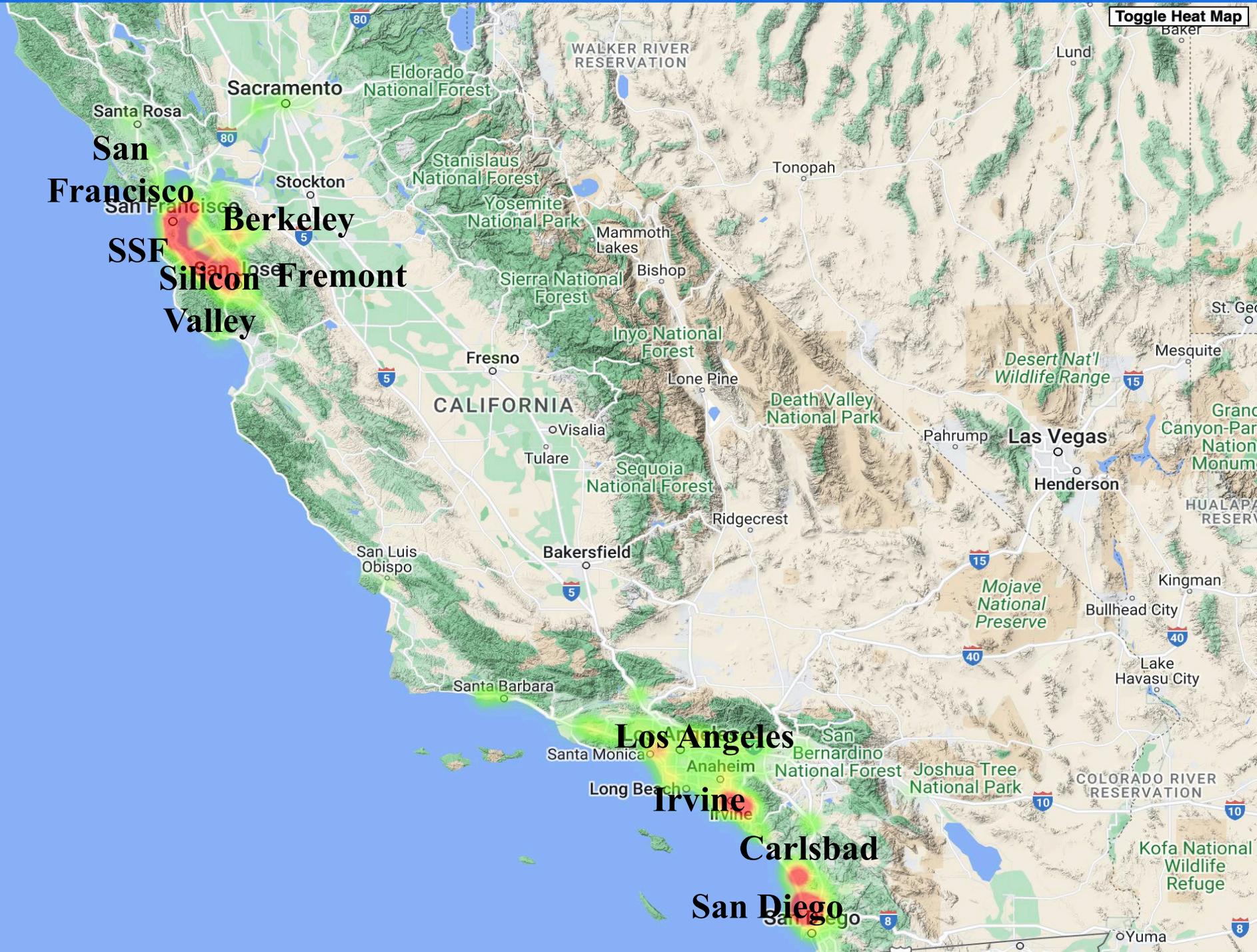


Fremont: # of medical equipment companies/total # of companies  
 $68/18,784 = 0.36\%$

State of California: # of medical equipment companies/total # of companies  
 $900/908,120 = 0.099\%$

Fremont medical equipment location quotient:  $0.36\%/0.099\% = 3.64$

# California Biomedical Companies



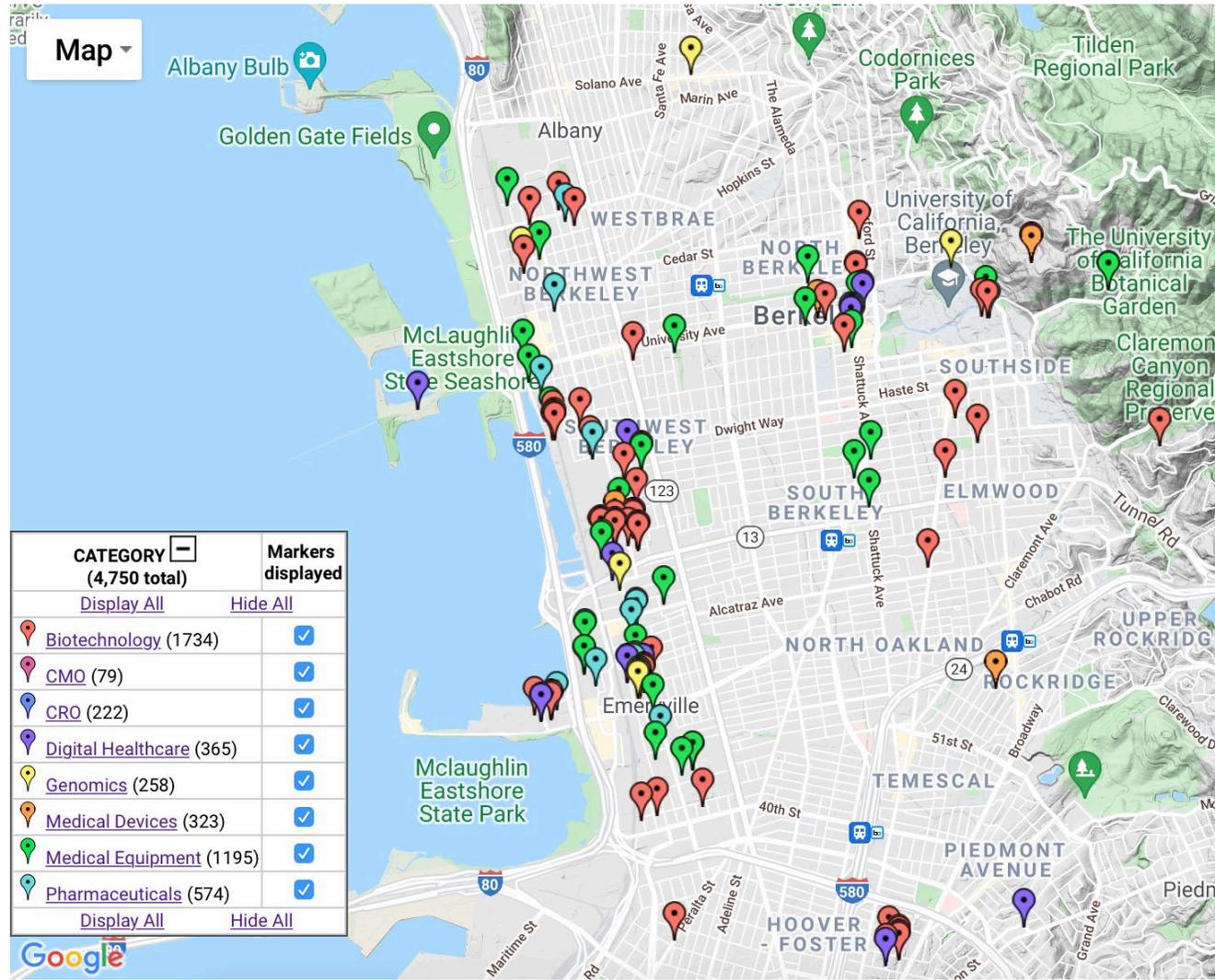
# Start-up Resources: Berkeley

## Firms

165+ biomedical companies in Berkeley (biotechnology & medical devices); Most very small with Bayer, Grifols and Novartis as exceptions

Over half with roots to UC Berkeley and/or LBNL

GRIFOLS



## Talent

85%+ have at least a Bachelors degree, 60% have a Masters or higher; many people have doctorates

## Investment

Most are early stage with SBIR funding; limited venture funding; highest rate of business failure

## Infrastructure

10 incubators; Wareham facilities; concentration of software and engineering



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# Value Chain Innovators: Silicon Valley

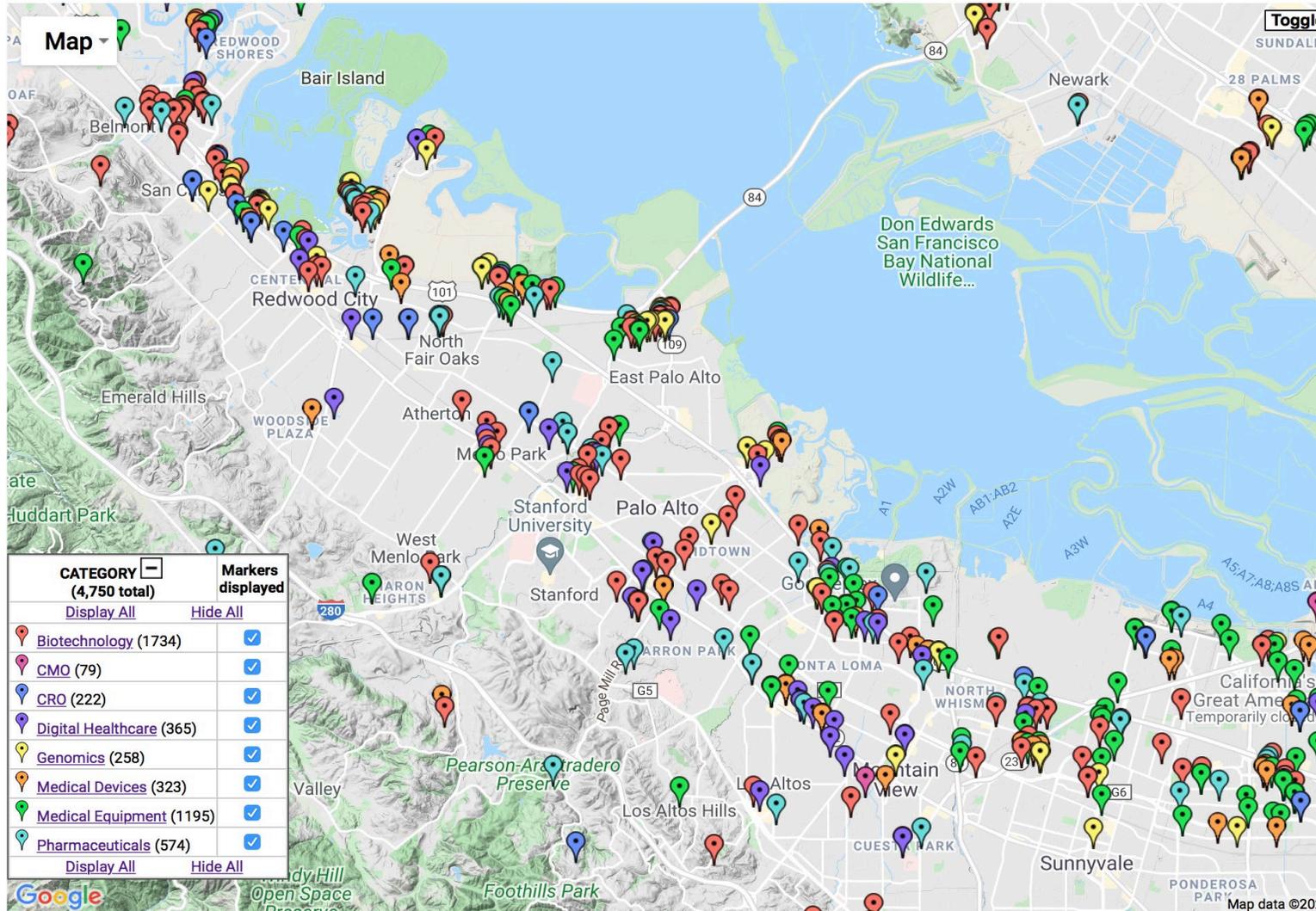
## Firms

300+ companies;  
Palo Alto, Menlo Park, Sunnyvale, Mountain View

High location quotients for venture capital, software, semiconductors, engineering

## Investment

Best location for venture capital; tech money, SV Bank



## Talent

80%+ have at least a Bachelors degree, 50% have a Masters or higher; some middle skill jobs in manufacturing; high cost of living

## Infrastructure

Stanford University; Spin-outs from tech companies; law firms; climate of entrepreneurship



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# Supply Networks: Irvine

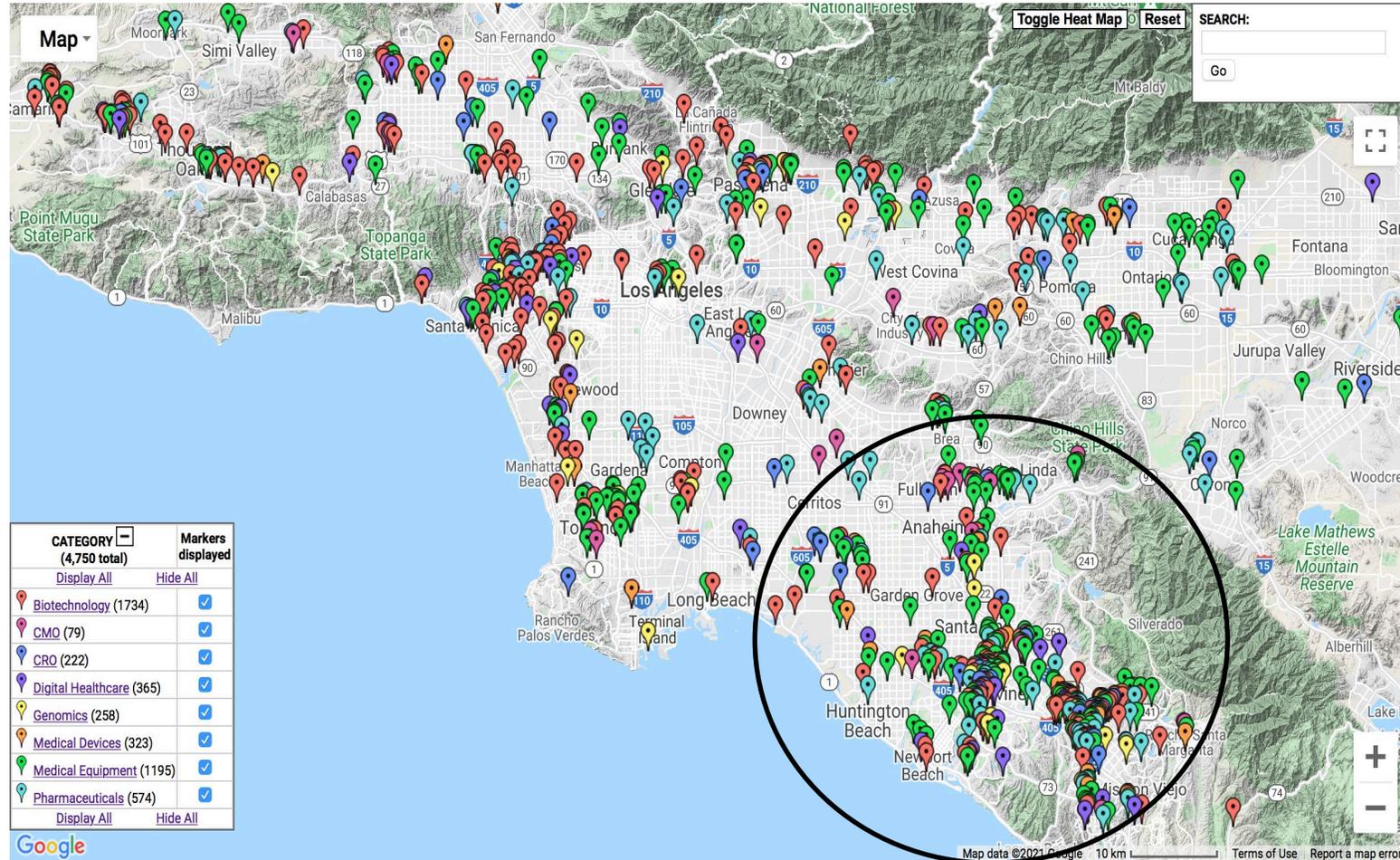
## Firms

210+ companies;  
highest LQ for medical  
equipment and devices

High location quotients  
for electronics, contract  
manufacturing, machine  
shops, engineering

## Investment

Irvine Company and  
UC-Irvine lead  
investment; corporate  
investment growing



## Talent

60%+ have at least a  
Bachelors degree,  
30% have a Masters  
or higher; middle  
skill jobs in  
manufacturing; high  
school and two-year  
degree

## Infrastructure

UC-Irvine; spin-outs  
from tech  
companies; climate  
of entrepreneurship



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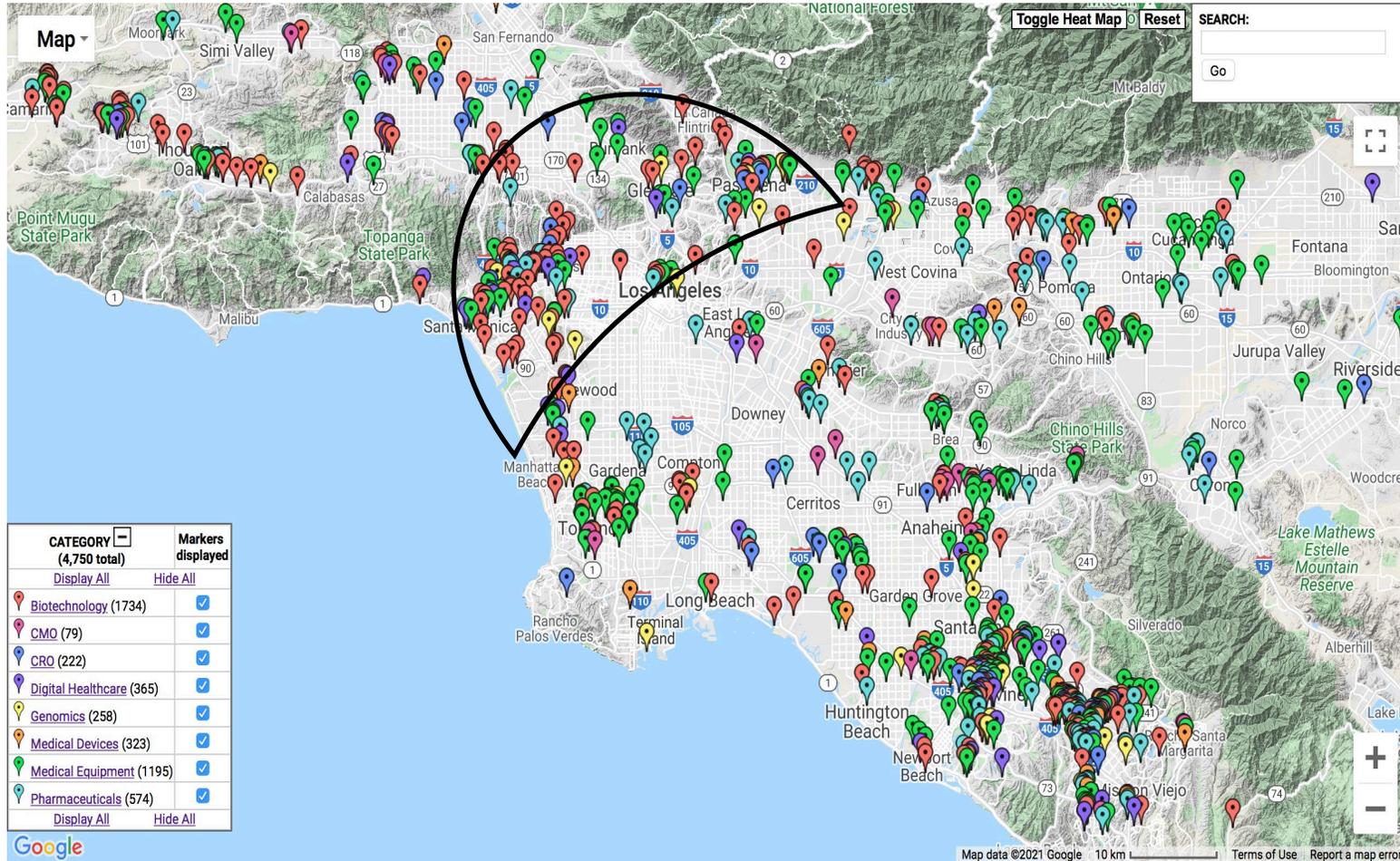
# Talent Pool: Los Angeles

## Firms

200+ companies; medical equipment companies are most prevalent; Arc of companies from Santa Monica through Westwood, to Pasadena

## Investment

\$1.15B in NIH funding in 2019; growing venture capital community



## Talent

80%+ have at least a Bachelors degree, 50% have a Masters or higher; some middle skill jobs in manufacturing especially in medical equipment

## Infrastructure

UCLA; CalTech; Spin-outs from tech companies; law firms; climate of entrepreneurship



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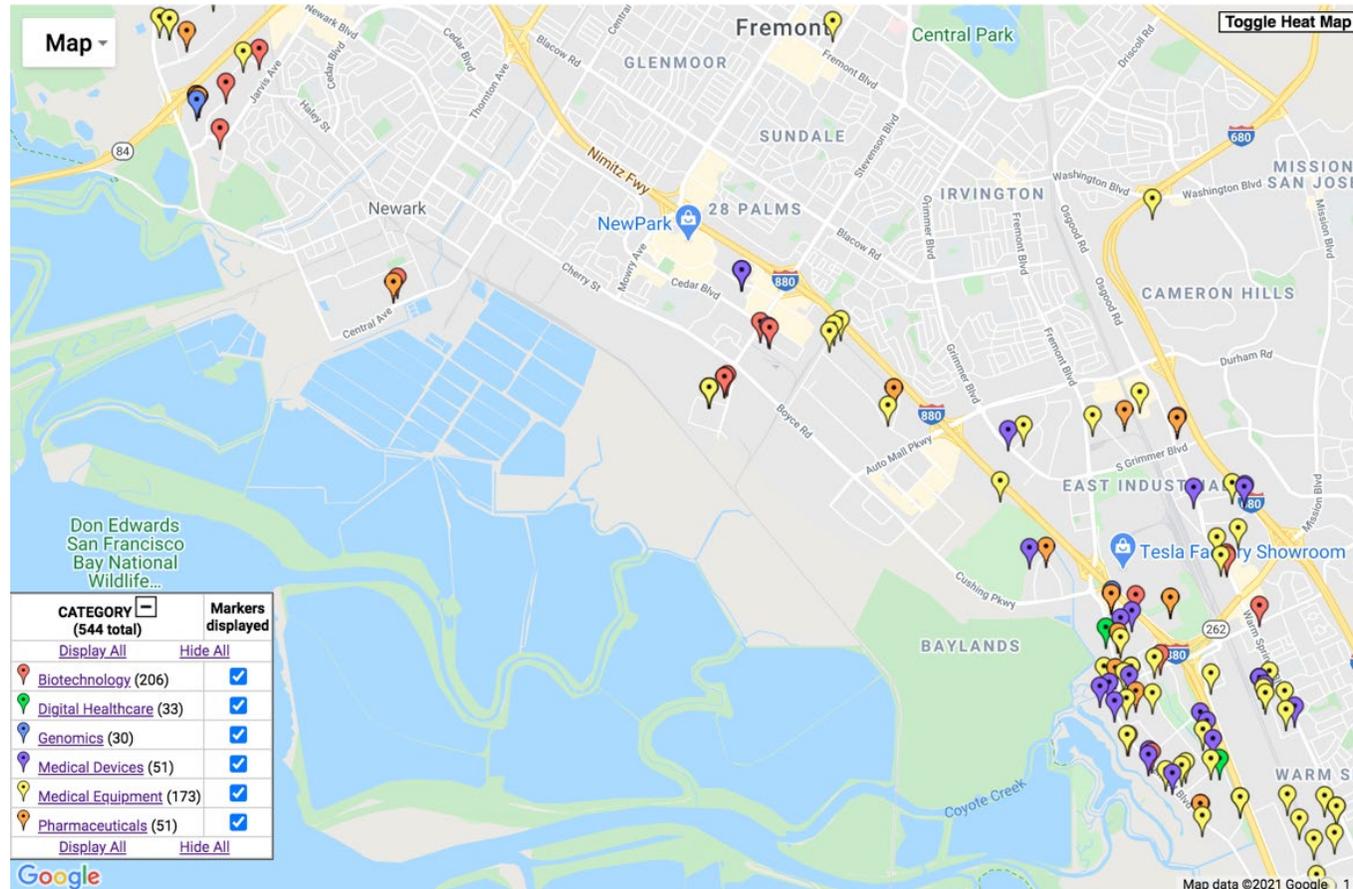
# Scale-Up: Fremont

## Firms

150+ biomedical companies in Fremont. Twice size on average; manufacturers; highest business survival

## Talent

50%+ jobs to people with HS or 2-year degree (middle skill jobs); relatively affordable cost of living



## Investment

Corporate and institutional investment; revenue

## Infrastructure

Manufacturing focus; support CMOs; newer space that is cheaper; high electronics and engineering location quotients

## Policy

Engaged city economic development; streamlined permitting and location assistance



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# Scale-Up: Carlsbad

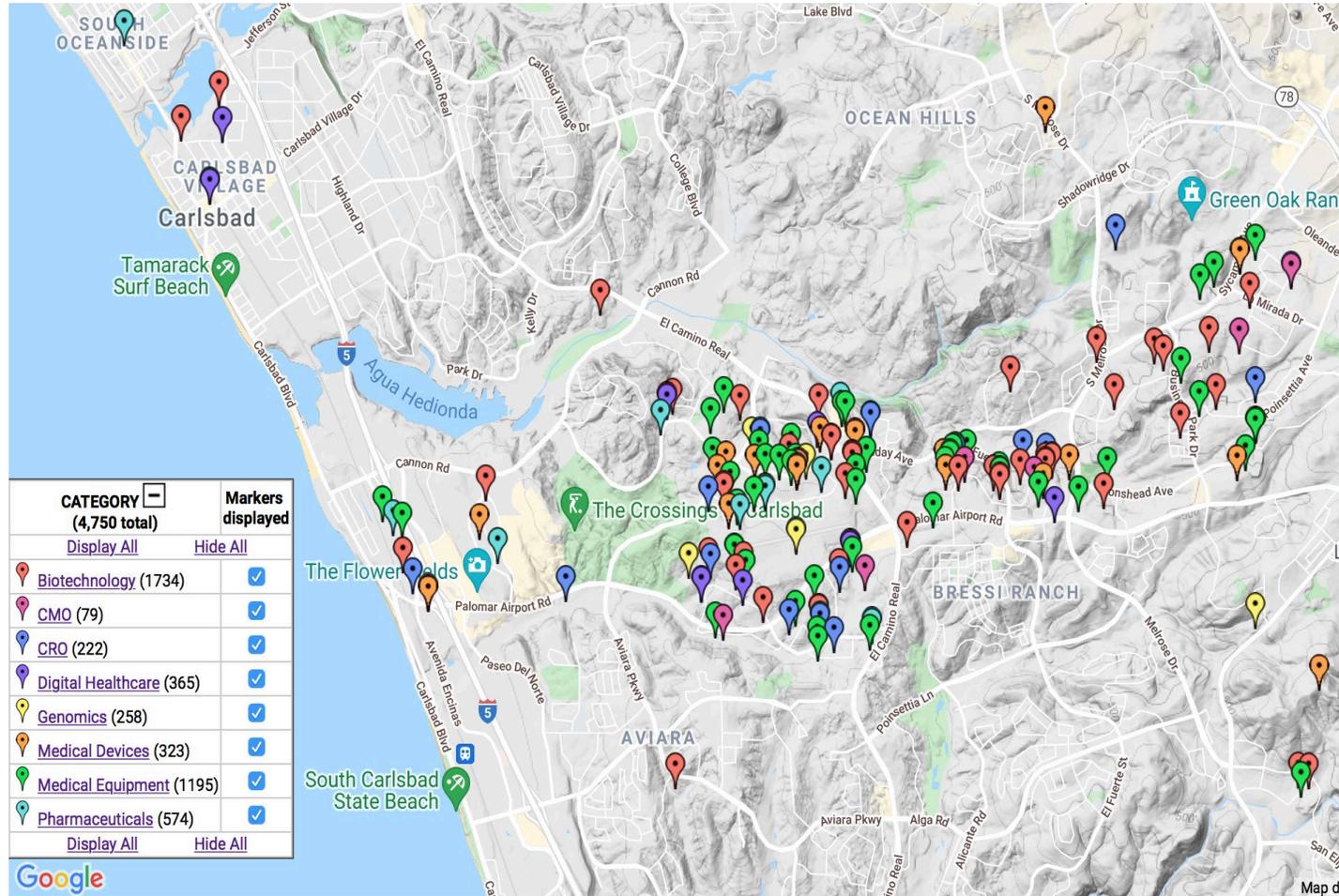
## Firms

150+ biomedical companies in Carlsbad. Twice size on average; manufacturers; highest business survival

## Talent

50%+ jobs to people with HS or 2-year degree (middle skill jobs); relatively affordable cost of living

**ThermoFisher**  
SCIENTIFIC



## Investment

Corporate and institutional investment; revenue

## Infrastructure

Manufacturing focus; support CMOs; newer space that is cheaper; high electronics and engineering location quotients

## Policy

Engaged city economic development; streamlined permitting and location assistance



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# Proximity Pipeline: South San Francisco

## Firms

250+ biopharmaceutical companies in SSF – 150 biotechnology and 90 pharmaceuticals

Only 50 companies with more than 20 employees

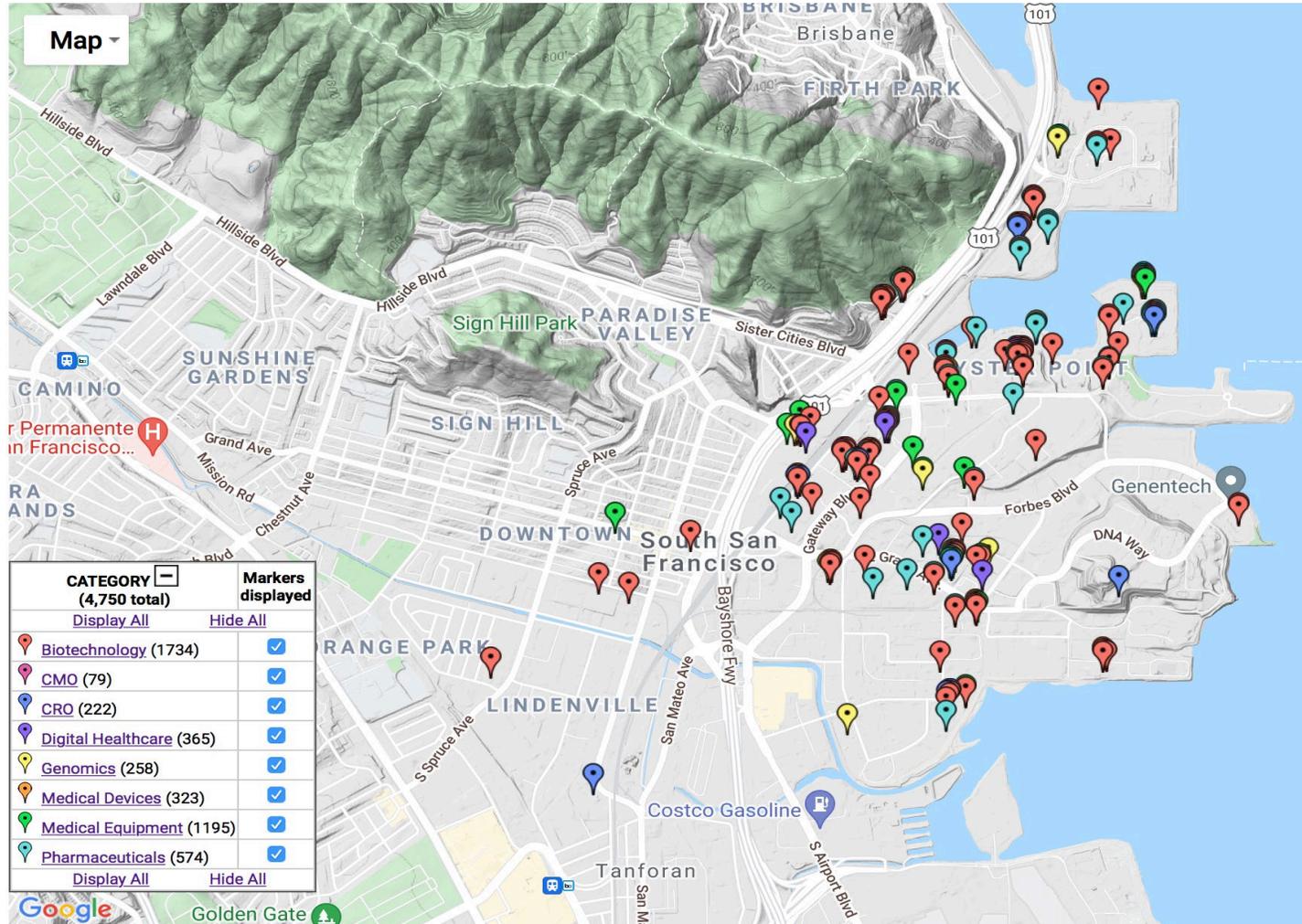
**Genentech**

**GILEAD**

**aimmune™**  
THERAPEUTICS

**ICONIC**  
THERAPEUTICS

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NETWORK



## Talent

85%+ have at least a Bachelors degree, 60% have a Masters or higher; few middle skill jobs

## Investment

Corporate venture funding (J&J, Thermo, Roche, Google); VC funding for start-ups

## Infrastructure

Density and proximity to support resources; housing and transport challenges

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# Emerging Sectors: San Francisco

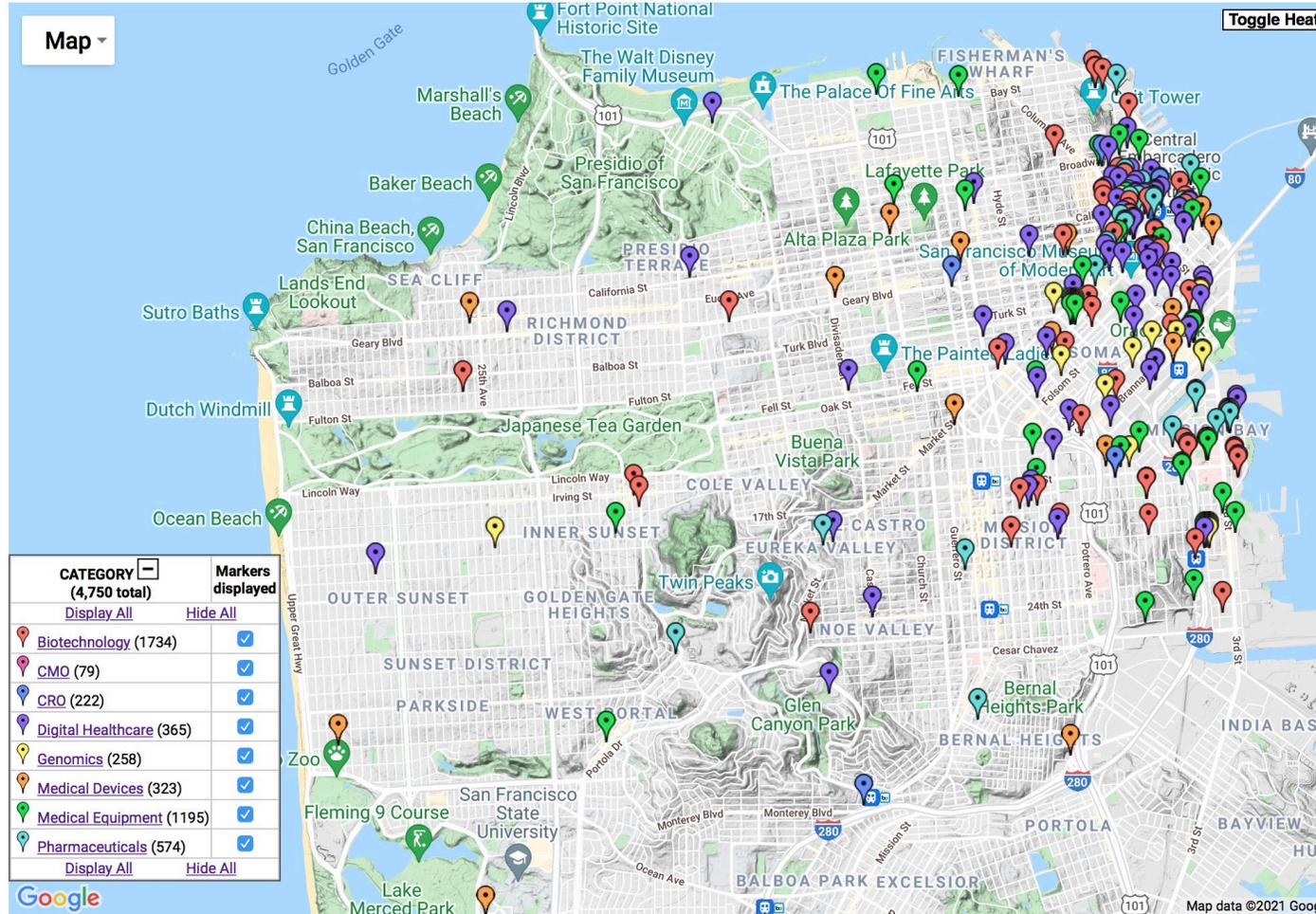
## Firms

300+ companies, many with a digital health care or genomics focus; South of Market & Mission Bay

High location quotients for software and engineering services

## Investment

Growing VC community  
Tech investment, spin offs, proximity to financial district; shorter exits; fastest growing sector



## Talent

80%+ have at least a Bachelors degree, 40% have a Masters or higher (Comp Sci, Engineering); access and competition for talent

## Infrastructure

10+ incubators and accelerators; Rock Health; QB3; UCSF; access to consulting and law firms



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# Bio-Pharma Powerhouse: San Diego

## Firms

900+ companies, especially in biotech and pharma R&D

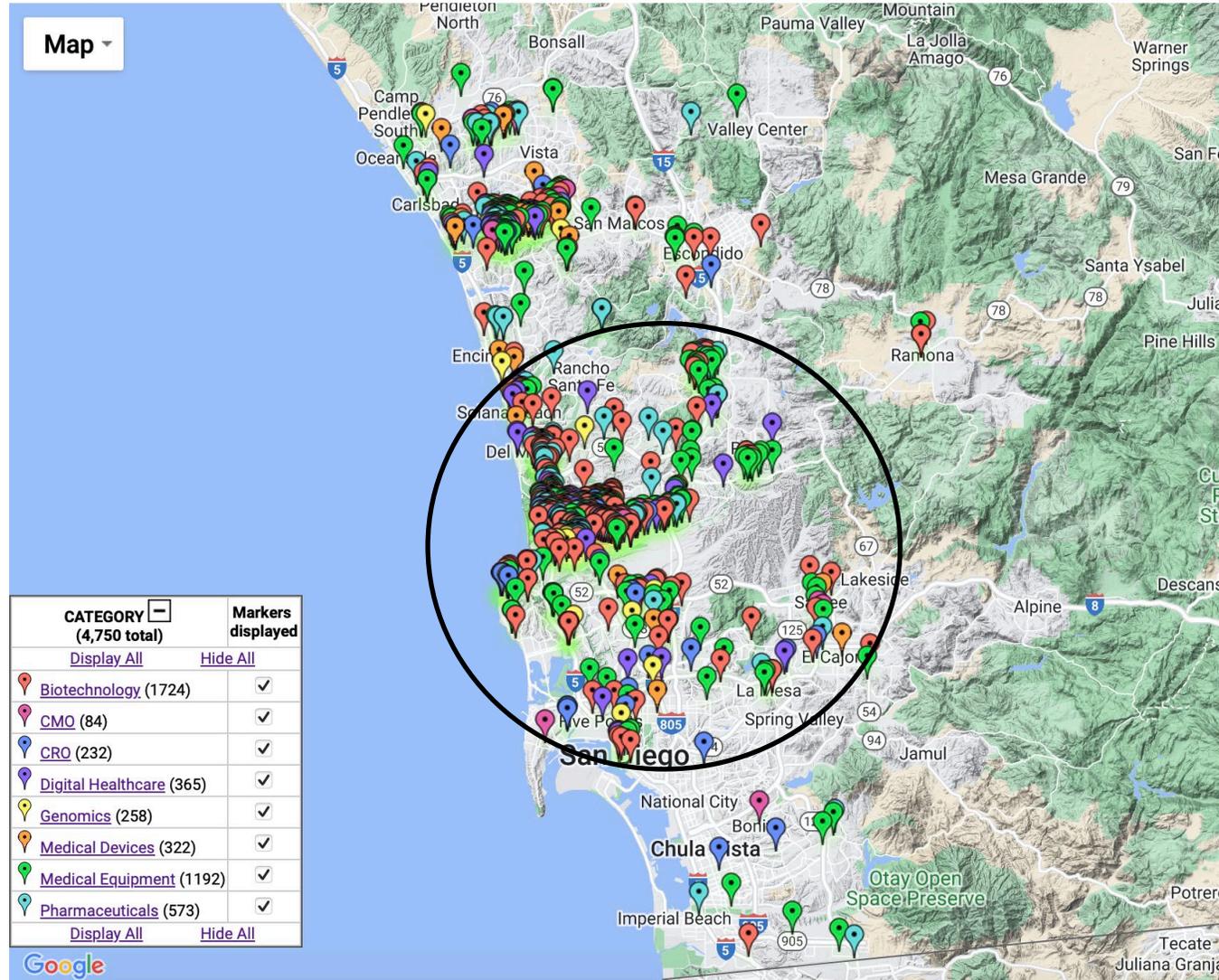
## Investment

Strong VC community, spin offs from UCSD; strong government research funding



illumina

dexcom



## Talent

80%+ have at least a Bachelors degree, 40% have a Masters or higher (Comp Sci, Engineering); access and competition for talent

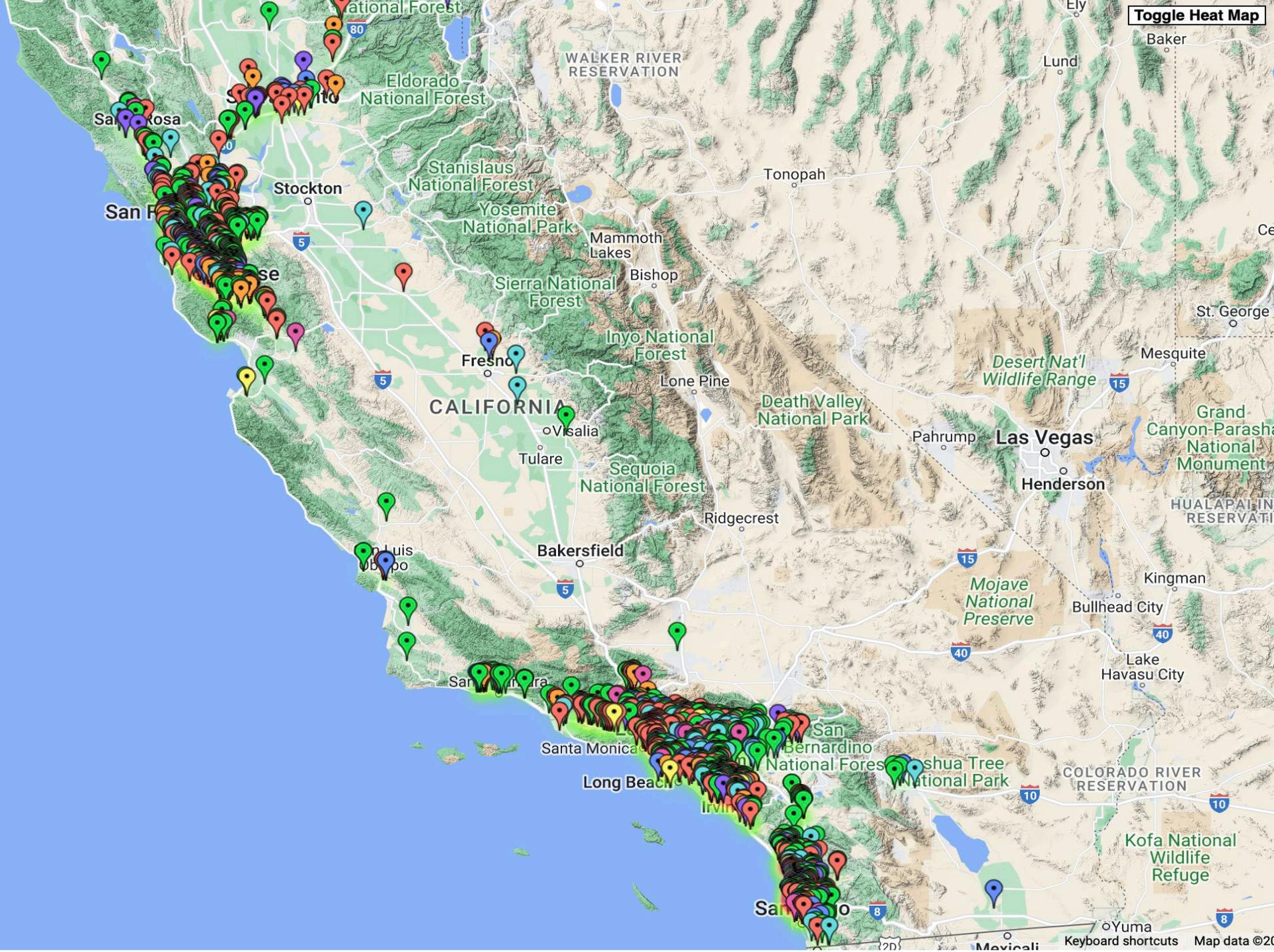
## Infrastructure

20+ incubators and accelerators



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